A CASE OF

Intra-Ovarian Pregnancy,

WITH POST-MORTEM EXAMINATION

BY

TALBOT JONES, M. D.,

OF ST. PAUL, MINN.

(Reprinted from the American Journal of the Medical Sciences.)
PHILADELPHIA:
1880.

A CASE OF INTRA-OVARIAN PREGNANCY, WITH POST-MORTEM EXAMINATION.

By TALBOT JONES, M. D.,

OF ST. PAUL, MINNESOTA.

Few events connected with the parturient state are more disastrous to the patient than the arrest of the vitalized germ in its passage from the ovary to the cavity of the uterus. This is true whether the fecundated ovule be retained in the ovary constituting what is known as ovarian pregnancy; is arrested in the Fallopian tube—tubal; or becomes imbedded in the uterine walls—interstitial. Ventral pregnancy—that variety in which the ovum, after impregnation, escapes into the abdominal cavity, there to remain indefinitely, is fortunately not nearly so fatal as the other varieties, although it too is attended with a very high rate of mortality.

This deviation from the normal course appears to have been known, though very imperfectly, to the ancients, for several of the early writers have alluded to such a condition. Albucasis saw a case where fœtal bones and debris were taken from what he termed an abcess, which had formed near the umbilicus. Horstius and Riolan, Jr., have mentioned somewhat similar cases.

Causes.—The etiology of this arrest is very obscure, and must remain so, for the obstacles are insuperable in the way of ascertaining with a reasonable degree of certainty the causes of extra-uterine fœtation, from our ignorance of the mechanism by which the fimbriated extremity of the Fallopian tube grasps the ovary. Again, the means at our command for diagnosticating this condition are not very reliable, and cannot be depended upon. Various theories have from time to time been advanced by different observers, yet to candid persons it must appear that with all that has been written our knowledge is still merely speculative. It has been supposed that there exist some morbid condition of the Fallopian tubes, such, for example, as paralysis or spasm, some deviation of its length, but especially some engorge-

ment of its mucous membrane, either congestive or inflammatory, producing mechanical obstruction to the passage of the fecundated ovule. This explanation appears plausible enough, when we remember that the Fallopian tube normally will scarcely admit of a bristle: Some have supposed that the tubal variety is often dependent on complete closure and obliteration of the tube. Indeed several cases of this variety have been observed. M. Gaide (*Journal Hebdomadaire*, t. i.) ascertained that in an interstitial pregnancy the right tube had no uterine orifice. M. Meniere (*Archives Gen.*, June, 1826,) encountered a similar case, only that in this instance the left instead of the right tube was impermeable. Cazeaux also had the opportunity of observing two cases of complete stricture of the tube, recorded in the *Bull. de la Societe Anat.* Virchow has noticed that this variety of pregnancy is frequently accompanied by adhesions of the internal genital organs, caused by false membranes, or cicatricial tissue, and is noticed much more frequently on the left side. Why ovarian pregnancy should ever occur must remain problematical.

Among the accidental causes numerous facts seem to show that fright or terror, occurring at the moment fecundation is being effected, may produce such a profound impression through the nervous system as to arrest the further progress of the ovule towards the uterus.

Curious examples are on record where shock and great agitation received in coitu have been supposed to produce this. Thus Baudelocque (*Dict. des Sciences Med.*, vol. xix.) relates a case of extra-uterine pregnancy, which is supposed to have been due to the shock received during the conjugal embrace, from hearing some one trying to enter the apartment. Lallemand [*Nouv. Journal de Med.*, vol. ii. page 320] cites a similar case, "and a third woman experienced much alarm by a stone being thrown through the window of her chamber during the time of sexual connection." Though these and other cases which might be cited seem to establish some connection between fright and the abnormal condition under consideration, yet, notwithstanding the high authority of the advocates of this doctrine, I cannot accept the explanation as satisfactory, or as having as a basis any foundation in fact. The truth is that the ovule does not part from the ovary either at the moment of fructification or during the time of sexual connection, but may do so several days prior or subsequent to this time, and this I think is fatal to the theory of fright. M. Dezeimeris relates a case where, shortly after fruitful connection, a blow received upon the hypogastrium was supposed to have caused this anomaly: and Montgomery, in one reported by Jackson in the

Dub. Med. Journ., vol. ii., "thinks a blow received on the abdomen shortly after conception produced such a degree of inflammation and engorgement as to arrest the ovule in its transit from the ovarium." It is a surprising fact that this accident is much more apt to occur in widows and unmarried women—a statement which rather lends support to this theory of fright or agitation. Campbell, in his learned and valuable memoir, says that out of fifteen caees, five were single, certainly a very large proportion when we remember the comparatively small number of unmarried females who become pregnant.

Malformation of the uterus is supposed in some instances to stand in causative relation. Meadows had the opportunity of examining, *post-mortem*, two cases of this kind, and found that the Fallopian tube, on the side corresponding with the arrested ovule, joined the uterus one inch below the fundus, thus causing "a deviation of the Fallopian canal and consequent arrest of the ovum in its passage to the uterus." Years ago Coste [*Embryogenie Comparee*, vol i. page 383] made the assertion, which, for a long time, remained uncontroverted, that of all animals woman alone was subject to extra-uterine pregnancy. This, however, is now known to be untrue: it has been known to occur repeatedly amongst brutes, and in Campbell's memoir, there are cited instances in which it has been observed in the hare, bitch, sheep, cow, and other animals. But it is the consideration of the ovarian variety, pure and simple, which chiefly concerns us in this article—that in which the ovum after being fructified lies imbedded in the avary.

Occurrence.—Ovarian pregnancy is so rare that many eminent anatomists and pathologists deny its ever occurring except where the fimbriated extremity of the Fallopian tube, having grasped the ovary, formed part of the cyst, and which, therefore, strictly speaking, would constitute a tubo-ovarian pregnancy. Those who hold to this belief maintain that fecundation can never occur in the vesicle of the ovary before the rupture of the ovisac. In other words that it is impossible for the spermatozoon to penetrate the ovisac without disturbing its integrity. So accurate an observer as Velpeau [*Trait. Elemen. de la l' Art des Accouch.*, vol. 1.] was led into the error of this belief. His opinion was founded upon the hypothesis, which subsequent investigation has shown to have been badly taken, that the ovum could never be impregnated without being detached from its bed. Allen Thomson [*Cyclop. of Anat. and Physiol.*, part xiii.] likewise maintained that intra-ovarian pregnancy for the same reasons never existed.

Farre and Thomas also hold to this view, and the latter has maintained his opinion with his accustomed ability and vigour. But the fact has been established beyond all doubt that the fœtus has been found within the ovary, and has in some instances progressively developed there up to the 4th or 5th month, when rupture of the cyst occurs. "No doubt there is great difficulty in determining the exact locality of the misplaced gestation in these cases of supposed ovarian

pregnancy, but there seems to be no reason why, when the fimbria is applied to the ovary which is on the point of rupturing, the spermatoza should not trail along the tube, and actually penetrate the outer coat of the ovisac just as the ovum is escaping. In this way ovarian gestation would be commenced"—[Meadows.] Indeed there are just such cases on record. In the work of MM. Bernutz and Goupil, translated by Meadows, for the New Sydenham Society, vol. page 249, there is such a case recorded.

At a meeting of the N. Y. Obstetrical Society, Feb. 1865, Dr. Kammerer presented a specimen of extra-uterine gravidity from a woman 30 years of age, who died a year previous. She had been under treatment for chronic metritis, and had passed from under his care, with the exception of the introduction of a large sound, once a month, to keep the cervix open. Seven or eight years previously she had a child. She became again pregnant, and a little time subsequently was taken suddenly ill with symptoms of internal hemorrhage and peritonitis, and in the course of a few hours died. Upon post-mortem examination, several quarts of blood were found within the peritoneal cavity, and on the left ovary a rent revealing the source of the hemorrhage On opening the ovary an embryo was discovered about four weeks old. In reply to a question by Dr. E. R. Peaslee, Dr. K. said that he could see no decidua within the uterine cavity [*N. Y. Medical Journal*, May, 1865]. The case which I report in this article was one of pure uncomplicated intra-ovarian pregnancy.

The earliest example on record of this variety of fœtation is found in the *Philos. Trans.*, vol. ii., reported by the Adbe de la Roque in 1682. An interesting case of ovarian gestation has been reported by J. Hall Davis in the *Transactions of the Obstetrical Society of London*, 1860, where the left ovary had degenerated into a mere cyst, and contained a dead fœtus.

In addition to these cases I will mention one recorded by Granville and Boehmer, together with the ten well-known cases collected by Spiegelberg, [*Arch. f. Gynæ.*,, xii. p. 74], which include cases of Willigk, Hein, Martyn, Giesserow, Hess, Kiwisch, Wright, Hecker, and others.

Since Spiegelberg collected these cases there have been two additional ones reported, viz., one in the *Giz. Obstetricale*, Bernutz, Jan. 1879, and one by Patenko [*Arch. f. Gynæ.*, xiv., lately issued].

Cohnstein [*Arch. f. Gynækologie*, xii. p. 367] has formulated certain rules for the proof that ovarian pregnancy exists, and without which, he maintains, no case of this variety is entitled to recognition. His rules are in the highest degree arbitrary, and, although I am quite willing to accept them and abide by the result, so far as they apply to the case I report, still, if adopted without reservation, it is almost certain to deny recognition to others which are clearly cases of intra-ovarian pregnancy, but which for various reasons cannot be established as such with the absolute clearness which a strict compliance with all his rules demands.

Among his rules may be mentioned the following: [*a*] Cylindrical epithelium must be seen under the microscope, taken from the interior

of the cavity inclosing the ovum; [*b*] passage of the fibres of the tunica albuginea into the wall of the ovisac; [*c*] particles of ovarian tissue in close continuity to the cavity containing the ovum; [*d*] absence of the ovary of that side; [*e*] connection of the ovisac with the uterus through the ovarian ligament.

I have no doubt that cases of ovarian fœtation are sometimes met which show themselves as such with great distinctness, but which are difficult if not impossible of demonstration. For example, in one case the Fallopian tube might be seen; also the round and ovarian ligaments; that it was inclosed within the broad ligaments; absence of the ovary of that side; you might even secure the ovary, post-mortem, and, with a care which would admit of no mistake, open it and find therein a fœtus, as has been done, and yet, because no cylindrical epithelium could be shown, or perhaps no fibres of the tunica albuginea discovered penetrating the wall of the ovisac, therefore the case was not entitled to recognition, although it would be perfectly apparent alike to reason, analogy, and to sight, that it was one of intra-ovarian gestation. Cohnstein's formulated rules, if adopted, would deny recognition to Dr. Kammerer's interesting case, already alluded to, because the latter failed to examine for ovarian fibres and cylindrical epithelium under the microscope, or perhaps neglected to search sufficiently for the ligament of the ovary, although he exhibited his specimen to the New York Obstetrical Society, was closely questioned in regard to it by Dr. Peaslee and other eminent members, and even opened the ovary and found therein the four weeks' embryo. Haselberg has lately reported a case, and described it minutely, still, because he neglected to make mention of the Fallopian tube, the case was for that reason omitted in the number recently collected and reported by Spiegelberg. For the same reason the case of J. Hall Davis and those of Granville and Boehmer would fail of recognition if judged by the rule insisted upon by our German confreres.

Symptoms.—As soon as the impregnated ovum takes up its abode in the ovary the uterus at once undergoes decided changes. There is a determination of blood to the organ, as in ordinary impregnation. A tough, gelatinous mucus, thick and ropy, secreted by the glands of the cervix, plugs the neck of the womb. The organ increases in size to a remarkable degree, sometimes enlarging even to two or three times its ordinary bulk; the mucous membrane becomes hypertrophied and considerably congested. There is a true decidua formed within its cavity, although Dr. Robert Lee does not believe this, and in the *Med. Gazette*, vol xxvi., cites two cases which came under his observation to disprove such an idea. Velpeau concurred with Dr. Lee in the belief that a true intra-uterine decidual membrane never formed in extra-uterine impregnation. There are now, however, few if any who hold to this opinion. The late Dr. John S. Parry, from a careful analysis of over five hundred cases [*Extra-uterine Pregnancy*, Phila., 1876], came to the conclusion that a true decidual membrane forms in the uterus alone and never in the cyst. His work is the most comprehensive in any language, and the deductions of Dr. Parry are entitled to great weight. Indeed, the weight of testimony is well

nigh unanimous that such a membrane does form, but that it is of short duration. "for, as the ovum does not enter the uterus, it has no office to perform, and therefore, like every other useless organ, becomes atrophied, loses its vascularity, and in a few months has returned to its normal condition." It undergoes a process of disintegration, and is eventually thrown off. Fortunately this matter is taken from the domain of speculation, and placed within that of clinical observation by Breschet, Campbell, and others. Some of these observers have seen the decidual membrane in the uterus *in situ* or after its expulsion by uterine action, which is usually accompanied by some sanguineous discharge.

In addition to the symptoms already enumerated may be mentioned the fact that in the intra-ovarian variety, the enlargement of the abdomen, if the patient does not die from rupture of the cyst before this is well marked, is not in the mesial line, but upon the side. Sometimes menstruation continues regularly, in other cases it disappears entirely. Severe hemorrhage may occur, which will probably lead to the supposition that abortion has taken place. In almost all cases there is from the start more or less abdominal pain ; this may be so severe as to excite suspicion of peritonitis. Generally, however, the pain is analogous to uterine pain. A sense of weight and oppression is oftentimes felt by patients. There may be present much irritability of the bladder, painful diarrhœa, and perhaps tenesmus. The most reliable of all evidence is that obtained by a vaginal examination If carefully conducted an enlargement can be readily detected on the side of the uterus, especially if the conjoined manipulation be practised. In the majority of cases the uterus is displaced

The anatomo-pathological phenomenon which has, perhaps, excited the greatest interest of embryologists, is that which relates to the amnion and chorion, the placenta, and cord. Do these form in cases of intra-ovarian fœtation? It does not come within the scope of this article to enter upon a discussion of the different theories and conflicting opinions which have in the past engaged the attention of individual writers or learned societies upon this question. At the expense of being considered dogmatic, I will say at once, and without fear of its being successfully controverted, that wherever the vitalized germ takes up its abode there the ovule will have its proper membranes—the amnion, chorion, placenta, and cord. This view, it need scarcely be said, is by no means accepted by all. There are men whose names carry great weight and whose opinions in such matters are entitled to our most respectful consideration, who far from believing this are rather disposed to believe that these being uterine organs either do not form at all, or, if so, are very imperfectly developed. There are others who maintain that the amnion and placenta are formed in extra-ovarian pregnancy, but the chorion and cord are absent. Cazeaux mentions, somewhere in his works, of a discussion to which he listened before the Academy of Medicine, Paris, during which learned members contended there was present in the cases of extra-uterine pregnancy an amnion but no chorion. The fallacy of this is apparent at once, when we remember the way in which the

ovum is developed; the allantois is necessarily absent if the chorion is not developed, and without the former no circulation can take place between the mother and embryo. The placenta is very much like that seen in an ordinary case of pregnancy, though greater in circumference, thinner and flatter. The cord closely resembles in size, length, and structure that observed in cases of uterine pregnancy.

Duration.—If observers could agree with reasonable unanimity upon any subject admitting of controversy, it would seem they could upon the question of the duration of the different varieties of extra-uterine fœtation. But it must be admitted that even here there is the greatest difference of opinion. "The duration of extra-uterine pregnancy will depend upon the situation; thus, if it be in the Fallopian tube it rarely lasts beyond two months, whereas ovarian pregnancy will continue for five or six months; on the other hand, in ventral pregnancy the fœtus will not only be carried to full term, but far beyond that period, amounting to several years." (Rigby.)

Campbell, in his monograph, says: "In ninety cases in which we can decide, or nearly so, on the stage of pregnancy, the fœtus in seventy-nine patients died at the close of the ninth month or soon thereafter—one in the eighth, seven about the seventh, one in the sixth, two in the fifth, two in the fourth, five in the third, and one at the end of the first month." But I cannot help agreeing with Meadows in the doubt he has thrown on the accuracy of these statistics. He says: "I cannot help thinking that there is some mistake in these figures, for whereas Dr. Campbell seems to imply that the chances are largely in favor of the fœtus going to the last month of utero-gestation, the experience of most men is certainly oppose to this, and taking the whole number and varieties of extra-uterine pregnancy, it appears that the chance of a rupture of the cyst increases with each succeeding month, and that very few pass beyond the fourth or fifth month."

It thus appears that of Campbell's ninety cases in seventy-nine, or about 85 per cent., the patients remained in good health up to the close of the ninth month of gestation whereas the experience of the vast majority of observers indicates that death from rupture of the cyst occurs before the fifth month in fully two-thirds, or 67 per cent. of all cases. The cases in which rupture takes place earliest are the tubal. In the few cases which have been reported of the internal ovarian variety, the rupture occurred on an average some weeks or months later than in the tubal variety. In the one I shall report death from rupture of the cyst occurred during the fourth month. In Dr. Kammerer's case the rupture took place at the end of four weeks; in a case reported by Ramsbotham between the third and fourth month. All these were strictly intra-ovarian.

That internal ovarian pregnancy will not, as a rule, be prolonged beyond the fourth or fifth month is clearly indicated, and the indication is sustained by concurrent testimony. I am aware that this statement is apparently opposed to the view of Campbell on this subject heretofore quoted, but it may be only apparent since in his statement of the probable duration of extra-uterine pregnancy he may have made, and probably did make, his estimates without reference to the ovarian

variety. Lesouef, who has given this subject careful study, dwells at length on the tendency of the tubal variety to rupture early.

Abdominal or ventral pregnancy may continue indefinitely. A remarkable case is on record where the fœtus remained in the abdominal cavity of the mother for upwards of forty-three years. Even more remarkable still is the case reported by Mr. L. R. Cook in the *Transactions of the Obstetrical Society of London* [1864]. A patient died two days after delivery of a dead child. *Post-mortem* examination revealed a large tumor in the abdomen. On examination a full sized child was found in the abdominal cavity "inclosed in its own membranes and having apparently been developed in the fimbriated extremity of the Fallopian tube."

Termination.—A few words with reference to the probable termination of extra-uterine fœtation. It may be stated as a rule, to which there are unfortunately but few exceptions, that the patient dies suddenly from rupture of the cyst, either primarily from shock incident to this accident, or secondarily of peritonitis from effusion into the peritoneal cavity. The exceptions are those rare cases of ventral pregnancy in which the fructified ovule, after having fallen into the abdominal cavity, there remains and develops, the fœtus advancing it may be to full term, then dying, either remains there indefinitely, with but little discomfort to the mother, or else—and this is much the more common rule—undergoes a process of disintegration and absorption. Not unfrequently the vitalized ovule after falling into the abdominal cavity becomes encysted and may remain there with but little constitutional disturbance for years. There are one or two curious cases on record where the patient continued in fair health for years, although labouring under intra-ovarian pregnancy. Granville had such a case in which the "fœtus lived for four months, but the patient survived ten years and a half, and then died of internal hemorrhage."

When the fœtus dies the circulation in the cyst is diminished, and it takes on rapid atrophy; becomes more indurated, and is now nothing more than a foreign body in the abdominal cavity. The vital powers begin to flag. Pain may be a prominent symptom from the start, or, on the contrary, may be but little felt. Generally the cyst sooner or later breaks down, ulcerations invade its walls, fistulous communications form openings either into the bowel, uterus, badder—rarely the stomach—or else through the abdominal parietes; the fœtal debris quickly pass through these fistulous canals by peace-meal, or the contents are discharged seriatim. This ulceration and discharge may continue for a long time, and undermine the patient's strength. The springs of life are sapped, and, finally, after a variable period, the patient succumbs.

Prognosis.—The prognosis of all varieties of extra-uterine pregnancy *a priori* is extremely unfavorable; in the vast majority of cases the patient dies, and usually expires suddenly. The mortality has been variously estimated from 65 to 99 per cent., the latter having reference to the ovarian and tubal varieties, the former of the ventral or abdominal.

To discuss the treatment of extra-uterine gravidity would be inconsistent with the original aim of this article.

The following interesting case occurred some time since in the practice of Dr. Murphy, of this city,

Mrs. M., age 38, native, married twelve or fifteen years, of average size, and had always enjoyed fair general health. Moved in the higher walks of life. Her three former confinements were perfectly normal. Seven years before the last pregnancy she had been delivered of a healthy child. In May she again became pregnant, as the subsequent history will show, for the fourth time. During the four succeeding months she experienced the usual symptoms of this condition—suppression of the catamenia, morning nausea, enlargement of the breasts, deeply shaded areola and slight secretion of milk. Even with these symptoms present, strange to say, the patient did not consider herself pregnant. During the middle of August there was noticed some enlargement of the abdomen, not centrally, but rather on the left side. About this time she began to experience severe spasmodic pains in the abdomen, which would usually commence on one side of the inguinal region, and suddenly dart to the opposite side.

Pain in the back was also a concomitant symptom. It was distinctly paroxysmal in character, and so intense as often to cause syncope outright. It was for the relief of this that she applied to her physician for treatment. The latter after hearing her statement told her at once that she was pregnant. So satisfied was he of this that no vaginal examination was deemed necessary. She was advised to try and bear her troubles for a while as patiently as possible. A simple opiate to quiet pain was given.

The patient, it appears, not altogether satisfied with this diagnosis and advice, applied to another physician, who, after a vaginal examination, came to the conclusion that she was laboring under some obscure disease of the left ovary, and advised her to undergo treatment appropriate to such cases. She was still dissatisfied and now alarmed at her condition. After hearing the previous history of the case an examination, was made per vaginam with the following result:

The enlarged uterus was felt distinctly retroflexed with the fundus well down in the hollow of the sacrum. The cervix was rather soft and spongy, long, and high up. External os slightly open. Internal os closed. The uterus was movable and somewhat tender to the touch. By conjoined manipulation a tense, resistant tumour was felt, occupying the left pelvis, which gave to the finger an impression of elasticity. It was only slightly movable, globular in shape, and apparently about the size of an orange. By percussion through the abdominal wall over the tumour there was dullness, but not absolute flatness. A distinct outline of the tumour could be traced through the abdominal walls. Obscure fluctuation was detected over the tumour. The patient always experienced some pain on the passage of her urine, and this was voided more frequently than usual. The bladder occupied its normal site. A positive diagnosis was not arrived at, though there was a strong suspicion of either ovarian or tubal pregnancy. The attempts to distinguish different portions of

the supposed fœtus, as a hand or foot, through the coats of the vagina, failed. Medical counsel was called, and with the concurrence of all present it was decided to carefully introduce a sound into the uterus.

After placing the woman on her back, this was done, though not without considerable hesitation, since, with these symptoms of pregnancy present, the probability of a normal pregnancy in a retroflexed uterus was not lost sight of. However, the sound readily entered the uteus to the fundus, and no greater obstacle to its entrance was noticed than is always experienced in passing this instrument in a uterus bent on itself. The womb was considerably enlarged, measuring by the sound just five inches in length. Neither a tumour nor fœtus could be detected in the uterine cavity. The mother had never experienced any movement of the child, and at no time could fœtal heart sounds be detected. The differential diagnosis now lay between ovarian or tubal fœtation and ovarian disease of a mixed character which we occasionally meet, the gland being converted partly into different cysts containing fluid, and partly into a solid tumour. Great obscurity still attached to the case. Here was a case where many of the symptoms pointed to existing pregnancy, and yet the uterus was empty. The propriety of tapping the cyst through the vigina with a small aspirator needle was now seriously entertained. The operation for gastrotomy was also thought of.

Palliative treatment consisted in giving half-grain morphia suppositories by the rectum for the relief of the intense pain which came on in distinct paroxysms, and which greatly prostrated the patient. Her nervous system was now unstrung; sleep rarely came without artificial aid; the bowels were constipated and the secretions disordered. There was a constant pain in the lower back and through the loins. A discharge per vaginam occurred from time to time, though this was never profuse. Such was the condition of our patient toward the latter part of September, and far into the fourth month of her pregnancy. Being summoned, early one morning, in great haste, on reaching the patient she was found in a state of collapse, and experiencing violent cramps in the side of her abdomen, much like severe colic. Hemorrhage was evidently the cause, for all the symptoms plainly pointed to this. Cold extremities, pallor of the countenance, excruciating abdominal suffering, clammy perspiration, extreme depression, a flickering pulse, and vomiting were a chain of symptoms not to be mistaken. Death soon closed the scene.

Post-mortem examination, made the day following her death, revealed about two pints of effused blood in the abdominal cavity. The enlarged ovary was inclosed between folds of the broad ligament. All the ovarian tissues were present. The Fallopian tube was secured with the ovary. No portion of it was enlarged as it would have been were it a case of the tubo-ovarian variety. The specimen, as now seen in alcohol, shows the fimbriated extremity of the Fallopian tube grasping the ovary, at its upper and inner border, and of about normal size. About two inches in of the tube, including the fimbriated extremity, was detached with the ovary. Unfortunately the ovarian

ligament was cut off close to the ovary in removing this from the patient's body. The stump can, however, be seen in the specimen when closely examined. It is to be regretted that the uterus was not secured with the ovary, in order to have shown the relation these organs bore to each other. However, as a report of the case was not thought of at the time, this was overlooked. I have carefully examned under the microscope portions of the mass of tissue near the rent in the ovary, and find that it is true ovarian tissue. "Particles of ovarian tissue in close continuity to the cavity containing the ovum" were plainly seen. I need scarcely say that "no ovary of that side" was found, except the one in which impregnation had taken place. No fibres of the tunica albuginea were seen passing into the wall of the ovisac, though for very obvious reasons. In order to have demonstrated this, mutilation of the specimen would have been necessary, and it was not considered desirable to do this. The left ovary was about the size of a large orange. There was a rent about three inches long in its anterior wall, revealing the source of the hemorrhage. Bulging out through this rent was seen a four months' fœtus surrounded by its own membranes—the amnion and chorion—with the fœtus still floating in the liquor amnii. By careful discretion the entire ovary was secured without injury to this organ, and without rupture of the bag of waters.

There could be no difference of opinion concerning this case of intra-ovarian pregnancy. Everything showed with the utmost distinctness. The fontanelles in the child's head could be seen through the delicate membrane inclosing the fœtus. The finger could trace the different forms af the skull, the fissures, fontanelles, etc., as well as detect every portion of the child by pinching it up between the fingers. In short, here was a case of pure internal ovarian fœtation, in which the fœtus was entirely surrounded by ovarian membranes and imbedded in the gland, which progressively developed there up to the fourth month, when rupture of the cyst caused hemorrhage into the abdominal cavity, and, as a result of this effusion, death to the mother. Examination of the uterus yielded negative results. It was found enlarged, and its mucous membrane much congested; but whether a true decidua was there present, or had been at any time, could not be determined with any degree of certainty. The ovary, is now preserved in alcohol, has been seen by many distinguished physicians, among whom I may mention Prof. Samuel White Thayer, M. D., of the University of Vermont, and Prof. Ford, of Ann Arbor, Mich., none of whom have expressed the slightest doubt as to its being a case of intra-ovarian fœtation. The specimen was also exhibited before the Minnesota State Medical Society, at its meeting in St. Paul two years ago.

Theoretically, I suppose there will be in the future, as in the past, doubts thrown on the possibility of this condition ever occurring; but for an unprejudiced man, who has once seen this specimen, to still doubt the occurrence of internal ovarian pregnancy, would be for him to doubt the accuracy of his own powers of vision.